## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re P | atent Applica                            | tion of:   |  |
|---------|--|--|--|
| Ravin I | BALAKRISHI                               | NAN, et al.  |  |
| Applica | ation No.: Ur                            | nassigned  | Group Art Unit: Unassigned   |
| Filed:  | August 11, 2                             | 003  | Examiner: Unassigned   |
| For:    | DIGITAL TA                               | PE DRAWING SYSTEM  |  |
|         |  | INFORMATION DISCLOS  | SURE STATEMENT   |
| PO Bo   | issioner for P<br>x 1450<br>dria, VA 223 |  |  |
| Sir:    |  |  |  |
| subjec  | ed certain info<br>t U.S. patent         | ormation which the Examiner m  | ovisions of 37 CFR § 1.56, there is hereby ay consider material to the examination of the the Examiner make this information of the subject application.   |
| 1.      | Enclosures                               | accompanying this Information I  | Disclosure Statement are:  |
|         | 1a.                                      | application or a PCT Internatio<br>English language translation (deach non-English language put<br>Explanations of Relevancy of Figure 2 providing a concise explanation<br>List of Copending Applications | complete or relevant portion(s)) attached to blication. References (ATTACHMENT 1(e), hereto) for of each non-English publication.  |
| 2.      | This Inform                              | mation Disclosure Statement is   |  |
|         | 2a.                                      | Continued Prosecution Applica<br>Within three months of the date<br>§ 1.491 in an international app<br>Before the mailing of a first Off   | g date of a national application other than a lition under § 1.53(d); e of entry of the national stage as set forth in lication. lice Action on the merits; or lice Action after the filing of a Request for |

Serial No.: Unassigned

| 3. |             | specified<br>Action un         | mation Disclosure Statement is filed under 37 CFR § 1.97(c) after the period in paragraph 2 above but before the mailing date of any of a Final Office der § 1.113, a Notice of Allowance under § 1.311 or an action that otherwise osecution in the application, AND  (Check either Item 3a or 3b; Item 3b to be checked if  |
|----|-------------|--------------------------------|---|
|    |             | 3a. 🗌<br>3b. 🗌                 | any reference known for more than 3 months)  The §1.97(e) Statement in Item 5 below is applicable; OR  The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:  enclosed.  to be charged to Deposit Account No. 19-3935.   |
| 4. |             | This Infor specified 4a.   4b. | mation Disclosure Statement is filed under 37 CFR §1.97(d) after the period in paragraph 3 above, but on or before payment of the Issue Fee, AND  The § 1.97(e) Statement in Item 5 below is applicable; AND  The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:  enclosed.  to be charged to Deposit Account No. 19-3935.  |
| 5. |             | Statemen                       | t under § 1.97(e) (applicable if Item 3a or Item 4a is checked)   |
|    | _           |                                | (Check either Item 5a or 5b)  |
|    |             | 5a. 🗌                          | In accordance with 37 CFR § 1.97(e)(1), it is stated that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.   |
|    |             | 5b. 🗌                          | In accordance with 37 CFR § 1.97(e)(2), it is stated that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known by any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. |
| 6. | $\boxtimes$ | This is a (1.53(b).            | continuation/divisional/continuation-in-part application under 37 CFR §   |
|    |             |                                | (Check appropriate Items 6a and/or 6b)  |
|    |             | 6a. 🗌                          | Copies of the publications listed on the attached Form PTO-1449 which were previously cited in prior application Serial No, filed on, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, have been omitted pursuant to 37 CFR § 1.98(d).  |
|    |             | 6b. 🛚                          | Copies of the publications listed on the attached Form PTO-1449 which were not previously cited in prior application Serial No. 09/406,088, filed on September 24, 1999, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, are provided herewith.  |

Serial No.: Unassigned

| 7.  |          |                          | continuation/divisional application under 37 CFR § 1.53(d) or a Request for decimal Examination under 37 CFR 1.114.   |
|-----|----------|--------------------------|---|
|     |          |                          | (Check either Item 7a or 7b)  |
|     |          | 7a.  <br>7b.             | The Issue Fee has not been paid. A Petition to Withdraw from issue under 37 CFR § 1.313(c) is filed concurrently herewith or has been granted. A continuation/divisional application under 37 CFR § 1.53(d) or a Request for Continued Examination under 37 CFR 1.114, after payment of the Issue Fee, is proper in accordance with 37 CFR § 1.53(d)(1)(ii) or 37 CFR 1.114(a), respectively.     |
| 8.  |          | This is a                | Supplemental Information Disclosure Statement.  |
|     |          |                          | (Check either Item 8a or 8b)  |
|     |          | 8a. 🗌                    | This Supplemental Information Disclosure Statement under 37 CFR § 1.97(f) supplements the Information Disclosure Statement filed on A bona fide attempt was made to comply with 37 CFR § 1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental IDS can be considered as if properly filed on |
|     |          | 8b. 🗌                    | This Supplemental Information Disclosure Statement is timely filed within one (1) month of the Notice under 37 CFR § 1.97 and 1.98, mailed  |
| 9.  | ☐ Ir     | n accordar<br>nderstood  | nce with 37 CFR § 1.98, a concise explanation of what is presently to be the relevance of each non-English language publication is:   |
|     |          |                          | (Check appropriate Items 9a, 9b, 9c and/or 9d)  |
|     |          | 9a. 🗌                    | satisfied because all non-English language publications were cited on the enclosed "English language version of the search report or action which indicates the degree of relevance found by the foreign office". (See MPEP § 609, Minimum Requirements for an Information Disclosure Statement, Part A(3): Concise Explanation of Relevance, 8th Ed.)  |
|     |          | 9b.                      | set forth in the application. satisfied because an English language translation (complete or relevant portion(s)) is attached to each non-English language publication.   |
|     |          | 9d. 🗌                    | enclosed as Attachment 1(e), hereto.  |
| 10. | be<br>th | e, material<br>an search | on is made that the information cited in this Statement is, or is considered to to patentability nor a representation that a search has been made (other report(s) from a counterpart foreign application or a PCT International ort, if submitted herewith). 37 CFR §§ 1.97(g) and (h).  |

11. The Commissioner is authorized to credit any overpayment or charge any additional fee required under 37 CFR § 1.17 for this Information Disclosure Statement to Deposit Account No. 19-3935.

By:

Respectfully submitted,

STAAS & HALSEY LLP

J. Randall Beckers Registration No. 30,358

Dated: UII D 1201 New York Ave., N.W., Suite 700

Washington, D.C. 20005 Telephone: (202) 434-1500 Facsimile: (202) 434-1501

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Sheet 1 of 1 APPLICATION NO. ATTORNEY DOCKET NO. U.S. DEPARTMENT OF COMMERCE FORM PTO-1449 PATENT AND TRADEMARK OFFICE 1252.1023C Unassigned FIRST NAMED INVENTOR LIST OF REFERENCES CITED BY APPLICANT Ravin BALAKRISHNAN, et al. FILING DATE GROUP ART UNIT (Use several sheets if necessary) August 11, 2003 Unassigned **U.S. PATENT DOCUMENTS** FILING SUB-DOCUMENT \*EXAMINER DATE **CLASS** INITIAL NO. DATE NAME CLASS AA 4,888,713 12/89 Falk AB 7/93 Kaga et al. 5,228,124 8/93 AC Roberts et al. 5,237,647 **FOREIGN PATENT DOCUMENTS** SUB-TRANSLATION DOCUMENT CLASS YES NO **CLASS** NO. COUNTRY DATE AD OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.) **TRANSLATION** YES NO [1] Bier, E. A., Stone, M. C., Pier, K., Buxton, W., & DeRose, T.D. (1993). ΑE Toolglass and magic lenses: The see-through interface. Proceedings of the ACM Sig-graph Conference, 73-80, New York: ACM. [2] Cutler, L.D., Frohlich, B., & Hanrahan, P. (1997). Two-handed direct AF manipulation on the responsive workbench. Proceedings of the 1997 Symposium on Interactive 3D Graphics, 107-114, New York: ACM. AG [3] Elrod, S., Bruce, R., Gold, R., Goldberg, D., Halasz, F., Janssen, W., Lee, D., McCall, K., Pedersen, E., Pier, K., Tang, J., & Welch, B. (1992). Liveboard: a large interactive display supporting group meetings, presentations and remote collaboration. Proceedings of the CHI'92 Conference on Human Factors in Computing Systems, 599-607, New York: ACM. [4] Guiard, Y. (1987). Asymmetric division of labour in human skilled bimanual AΗ action: The kinematic chain as a model. Journal of Motor Behaviour, 19, 486-517. [5] Hinckley, K., Pasuch, R., Goble, J.C., & Kassell, N.F. (1994). Passive real-ΑI world interface props for neuro-surgical visualization. Proceedings of the CHI'94 Conference on Human Factors in Computing Systems, 452-458, New York: ACM. [6] Hinckley, K., Pausch, R., Proffitt, D., Patten, J., & Kassell, N. (1997). AJ Cooperative bimanual action. Proceedings of the CHI'97 Conference on Human Factors in Computing Systems, 27-34, New York: ACM [7] Hinckley, K., Pausch, R., & Proffitt, D. (1997). Attention and visual feedback: AK The bimanual frame of reference. Proceedings of the 1997 Symposium on Interactive 3D Graphics, 121-126, ACM. AL [8] Hinckley, K., & Sinclair, M. (in press). Touch-sensing input devices. To ppear in the Proceedings of the CHI'99 Conference on Human Factors in Computing Systems. New York: ACM.

| AM        | [9] Kabbash, P., Buxton, W., & Sellen, A. (1994). Two-handed input in a  |                |  |  |  |
|-----------|--|----------------|--|--|--|
|           | compound task. Proceedings of the CHI'94 Conference on Human Factors in  |                |  |  |  |
|           | Computing Systems, 417-423, New York: ACM.   |                |  |  |  |
| AN        | [10] Krueger, M. (1991). VIDEOPLACE and the interface of the future. <i>The Art of Human Computer Interface Design</i> , ed. Brenda Laurel, 417-422, Menlo Park, CA: Addison Wesley.   |                |  |  |  |
| AO        | [11] Kurtenbach, G., Fitzmaurice, G., Baudel, T., & Buxton, W. (1997). The design of a GUI paradigm based on tablets, two-hands, and transparency. <i>Proceedings of the CHI'97 Conference on Human Factors in Computing Systems</i> , 35-42, New York: ACM. |                |  |  |  |
| AP        | [12] Leganchuk, A., Zhai, S., & Buxton, W. (in press). Manual and cognitive benefits of two-handed input: An experimental study. To appear in <i>ACM Transactions on Computer-Human Interaction</i> , New York: ACM.   |                |  |  |  |
| AQ        | [13] Zeleznik, R. C., Forsberg, A. S., & Strauss, P. S. (1997). Two pointer input for 3D interaction. <i>Proceedings of the 1997 Symposium on Interactive 3D Graphics</i> , 115-120, New York: ACM. CHI Letters vol 1, 1 169                                 |                |  |  |  |
| AR        |  |                |  |  |  |
| EXAMINER  | DATE CONSIDERED  |                |  |  |  |
| +EVALUNED | al if reference considered, whether or not district is in conformance with MPEP 609. Draw  | lin a Ahmarrah |  |  |  |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

|                                |                      | ATTACHMENT 1(f) |
|--------------------------------|----------------------|-----------------|
|                                | ATTORNEY DOCKET NO.  | APPLICATION NO. |
|                                | 1252.1023C           |                 |
| LIST OF COPENDING APPLICATIONS | FIRST NAMED INVENTOR |                 |
|                                | Ravin BALAKRISHNA    | N, et al.       |
|                                | FILING DATE          | GROUP ART UNIT  |
|                                | August 11, 2003      | Unassigned      |

The following, prior-filed, copending U.S. patent application(s) is/are listed in accordance with the duty of disclosure provisions of 37 CFR § 1.56, so that the Examiner may consider same should he deem any thereof to be material to examination of the subject application. Pursuant to 37 CFR 1.98(a)(2)(iii), a copy of the identified copending application(s) is provided.

It is requested that the Examiner acknowledge his consideration of application(s) below-listed by initialling same in the space provided adjacent each such application and that the Examiner sign and date this form at the bottom thereof to confirm such consideration having been given.

This submission in no way represents an admission that any of the information listed herein constitutes prior art with respect to the subject application and unless and until such prior art status is established, this submission is not a request that the information presented herein be printed on the face of any patent issuing from the subject application in which this information is being filed.

## **U.S. PATENT APPLICATION DOCUMENTS**

| EXAMINER<br>INITIAL |   | U.S. SERIAL NO. | FILING DATE | NAME                      | ASSIGNEE |
|---------------------|---|-----------------|-------------|---------------------------|----------|
|                     | 1 | 09/406,088      | 9/24/9      | Ravin BALAKRISHNAN et al. |          |
|                     | 2 |                 |             |                           |          |
|                     | 3 |                 |             |                           |          |
|                     | 4 |                 |             |                           |          |
|                     | 5 |                 |             |                           |          |
|                     | 6 |                 |             |                           |          |
|                     | 7 |                 |             |                           |          |
|                     | 8 |                 |             |                           |          |

| EXAMINER   | DATE CONSIDERED |  |  |  |
|--|-----------------|--|--|--|
| EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |                 |  |  |  |

## LIST OF ADDITIONAL SUBMITTED DOCUMENTS

DOCUMENT

NO.

\*EXAMINER

**EXAMINER** 

AA

INITIAL

| ATTORNEY DOCKET NO.  | APPLICATION NO. |
|----------------------|-----------------|
| 1252.1023C           | Unassigned      |
| FIRST NAMED INVENTOR |                 |
| Ravin BALAKRISHNAN   |                 |
| FILING DATE          | GROUP ART UNIT  |
| Unassigned           | Unassigned      |

SUB-

**CLASS** 

CLASS

FILING

DATE

The following document(s) is/are listed in accordance with the duty of disclosure provisions of 37 CFR § 1.56, so that the Examiner may consider same should he deem any thereof to be material to examination of the subject application. Pursuant to 37 CFR 1.98(a)(2)(iii), a copy of any identified copending application(s) is provided.

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**U.S. PATENT DOCUMENTS** 

NAME

DATE

|   | AB   |                                    |                               |   |                              |               |               | · · ·       |
|---|--|------------------------------------|-------------------------------|---|------------------------------|---------------|---------------|-------------|
|   |  | .l                                 | FOREIGN                       | PATENT DOCUMENTS                                  | <u> </u>                     |               |               |             |
|   |  | DOCUMENT<br>NO.                    | DATE                          | COUNTRY   | CLASS                        | SUB-<br>CLASS | TRANSI<br>YES | ATION<br>NO |
| ,   | AC   |                                    |                               |   |                              |               |               |             |
| · · · · · · · · · · · · · · · · · · ·                                   | AD   |                                    |                               |   |                              |               |               |             |
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.) |  |                                    |                               |   |                              | TRANS<br>YES  | NO            |             |
|   | AE Balakrishnan, Ravin et al. (1999). Exploring Interactive Curve and Surface Manipulation Using a Bend and Twist Sensitive Input Strip, Alias/wavefront, Toronto, Ontario, Canada and Dept. of Computer Science University of Toronto, Toronto, Ontario, Canada |                                    |                               |   |                              |               |               |             |
|   | AF   | Balakrishnan, I<br>Toronto, Ontari | Ravin et al.,<br>io, Canada a | Digital Tape Drawing, Aliand Dept. of Computer So | as/wavefront<br>cience Unive | ,<br>rsity of |               |             |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED

Toronto, Toronto, Ontario, Canada November 1999